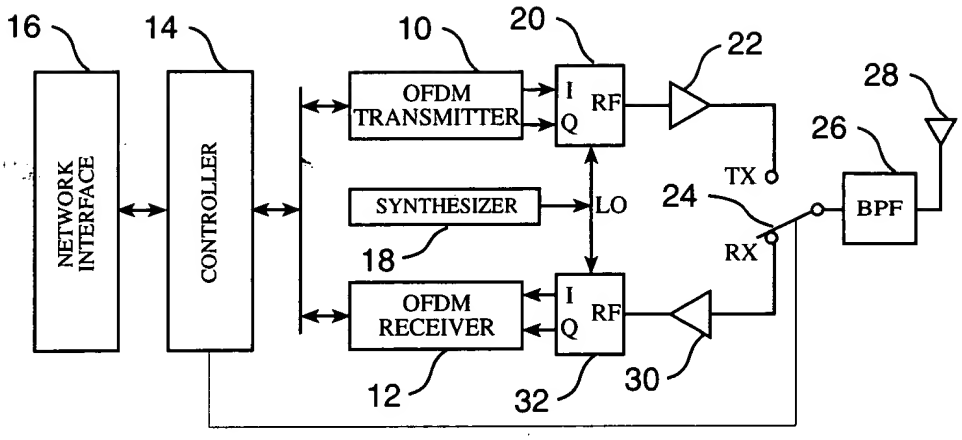


Figure 1

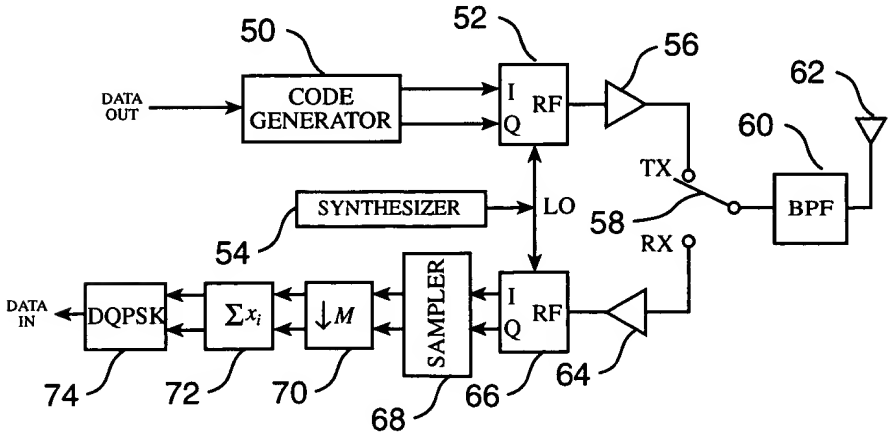


Figure 2

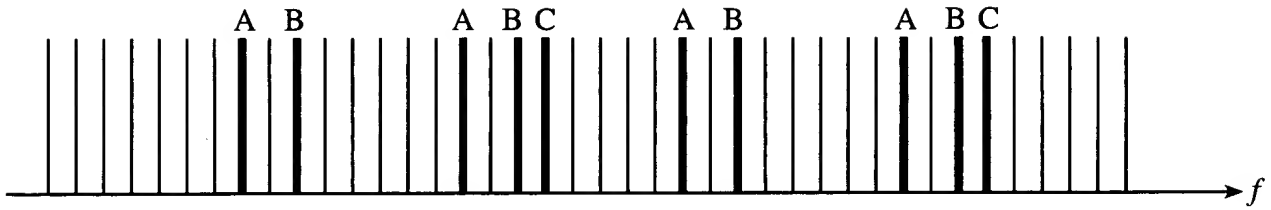


Figure 3

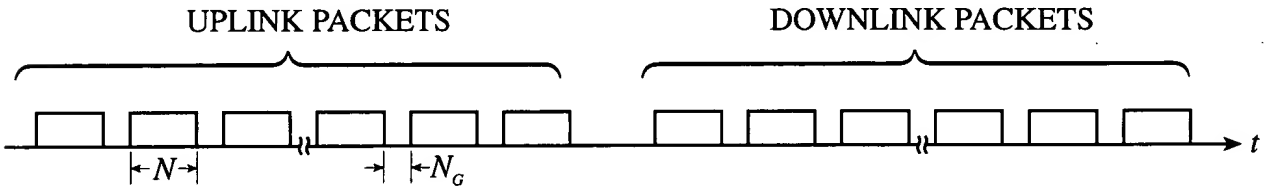


Figure 4

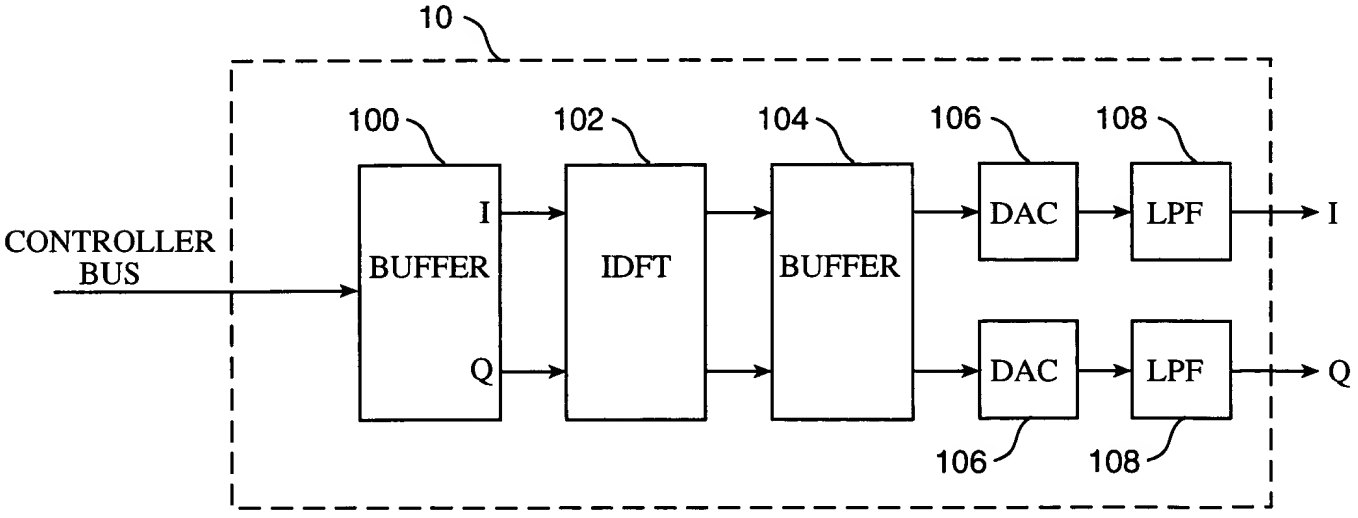


Figure 5

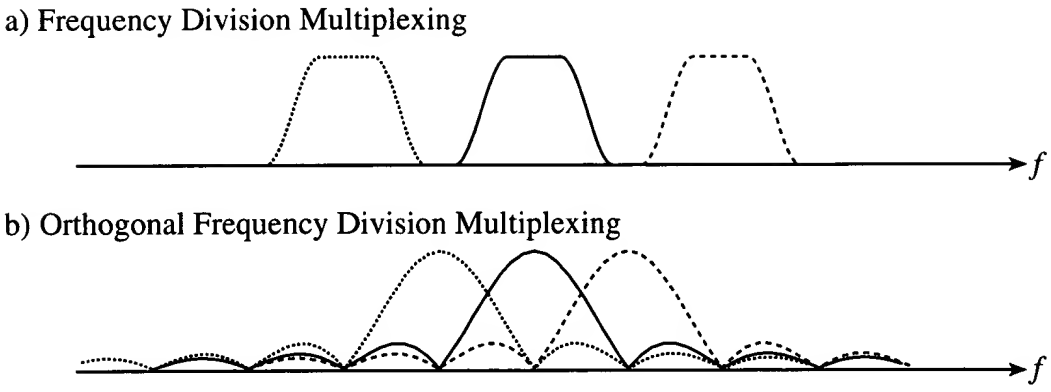


Figure 6

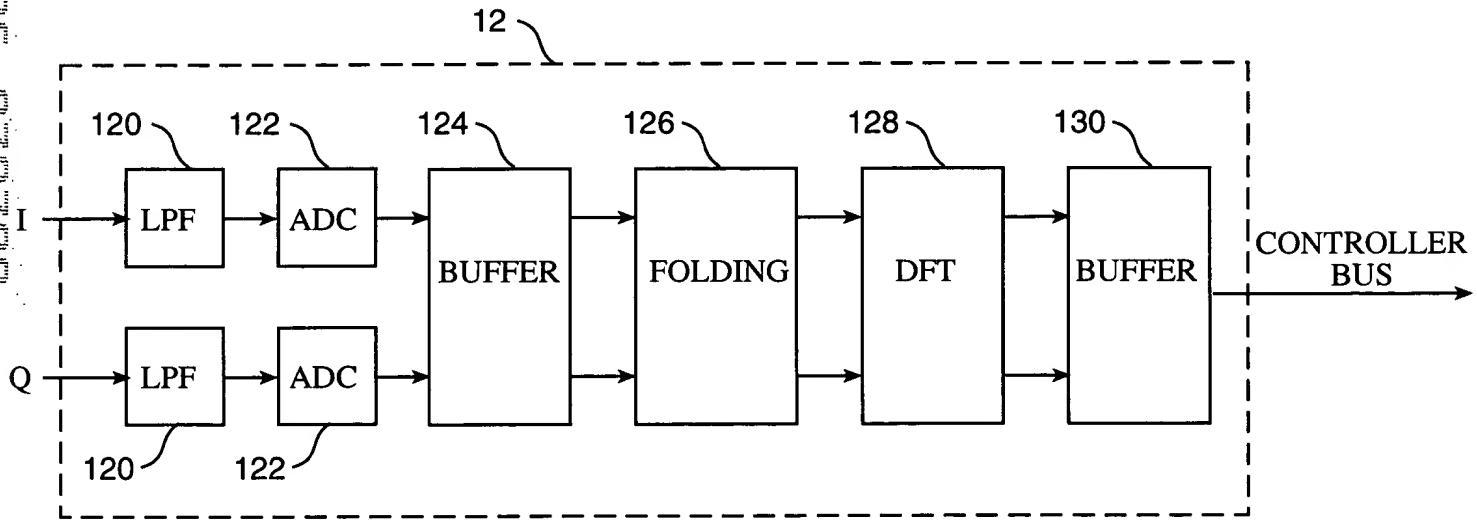


Figure 7

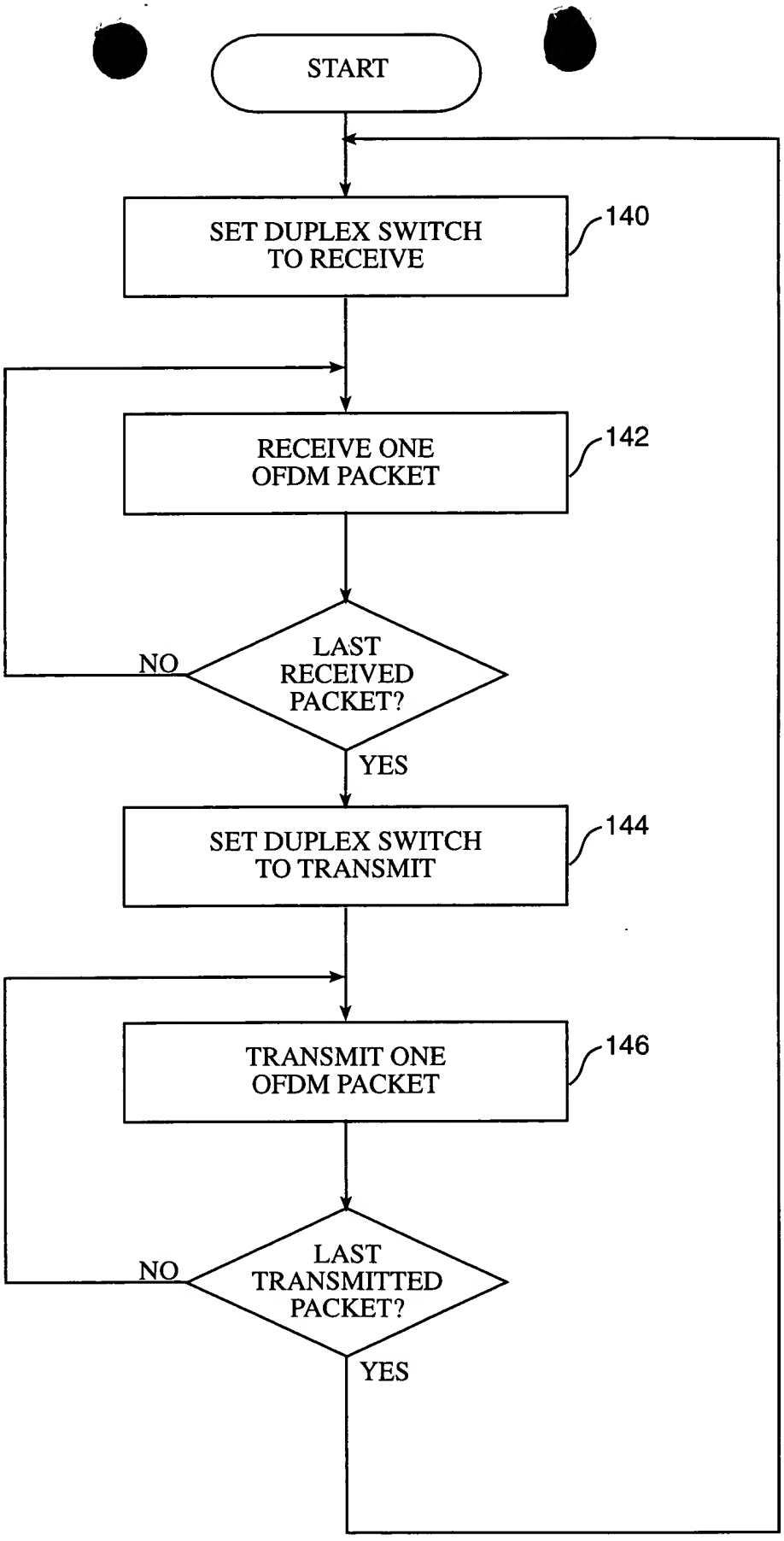

START
SET DUPLEX SWITCH TO RECEIVE
140
RECEIVE ONE OFDM PACKET
142
LAST RECEIVED PACKET?
NO
YES
SET DUPLEX SWITCH TO TRANSMIT
144
TRANSMIT ONE OFDM PACKET
146
LAST TRANSMITTED PACKET?
NO
YES

Figure 8

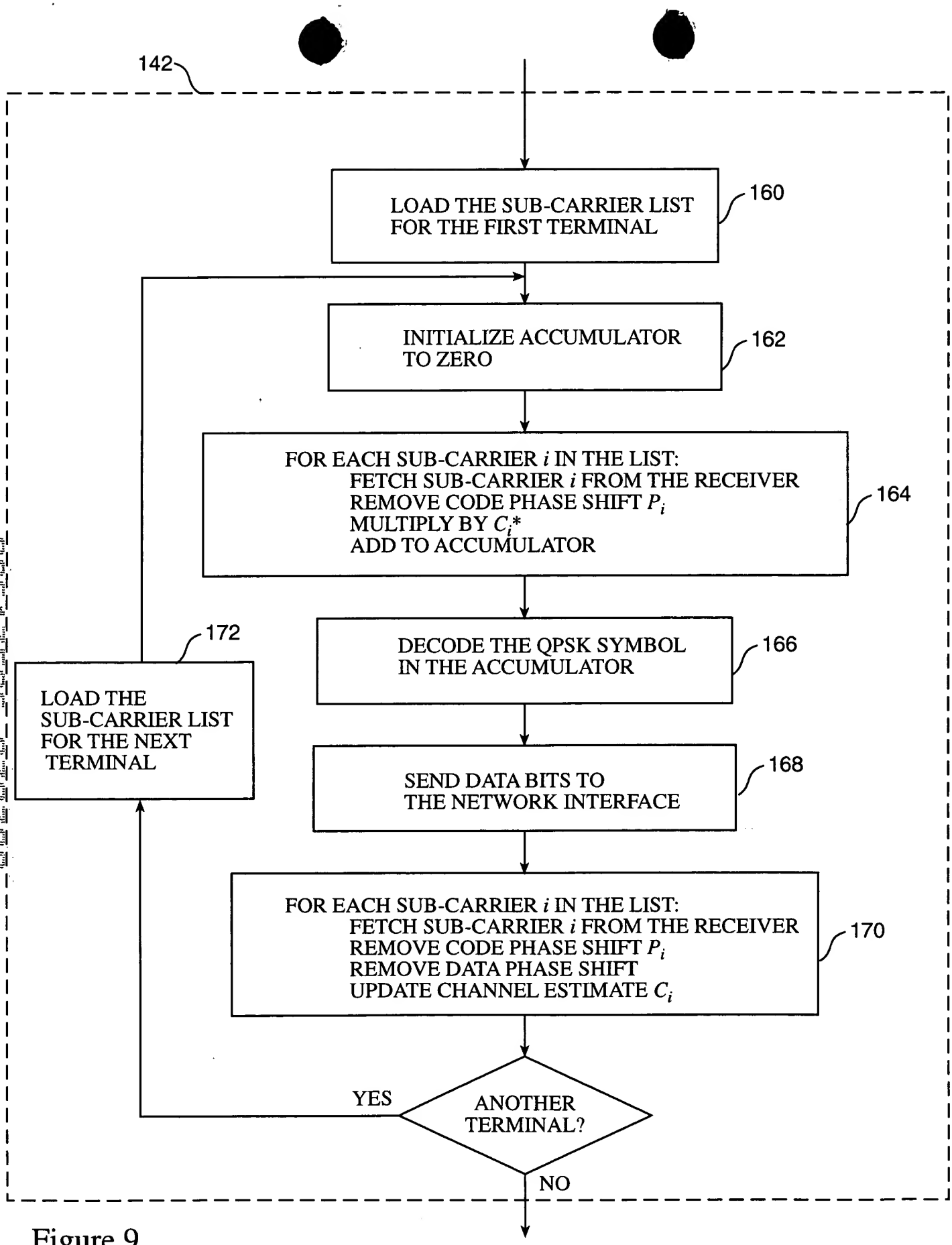

142
LOAD THE SUB-CARRIER LIST FOR THE FIRST TERMINAL
160
INITIALIZE ACCUMULATOR TO ZERO
162
FOR EACH SUB-CARRIER i IN THE LIST:
FETCH SUB-CARRIER i FROM THE RECEIVER
REMOVE CODE PHASE SHIFT P_i
MULTIPLY BY C_i*
ADD TO ACCUMULATOR
164
DECODE THE QPSK SYMBOL IN THE ACCUMULATOR
166
SEND DATA BITS TO THE NETWORK INTERFACE
168
FOR EACH SUB-CARRIER i IN THE LIST:
FETCH SUB-CARRIER i FROM THE RECEIVER
REMOVE CODE PHASE SHIFT P_i
REMOVE DATA PHASE SHIFT
UPDATE CHANNEL ESTIMATE C_i
170
ANOTHER TERMINAL?
YES
NO
LOAD THE SUB-CARRIER LIST FOR THE NEXT TERMINAL
172

Figure 9

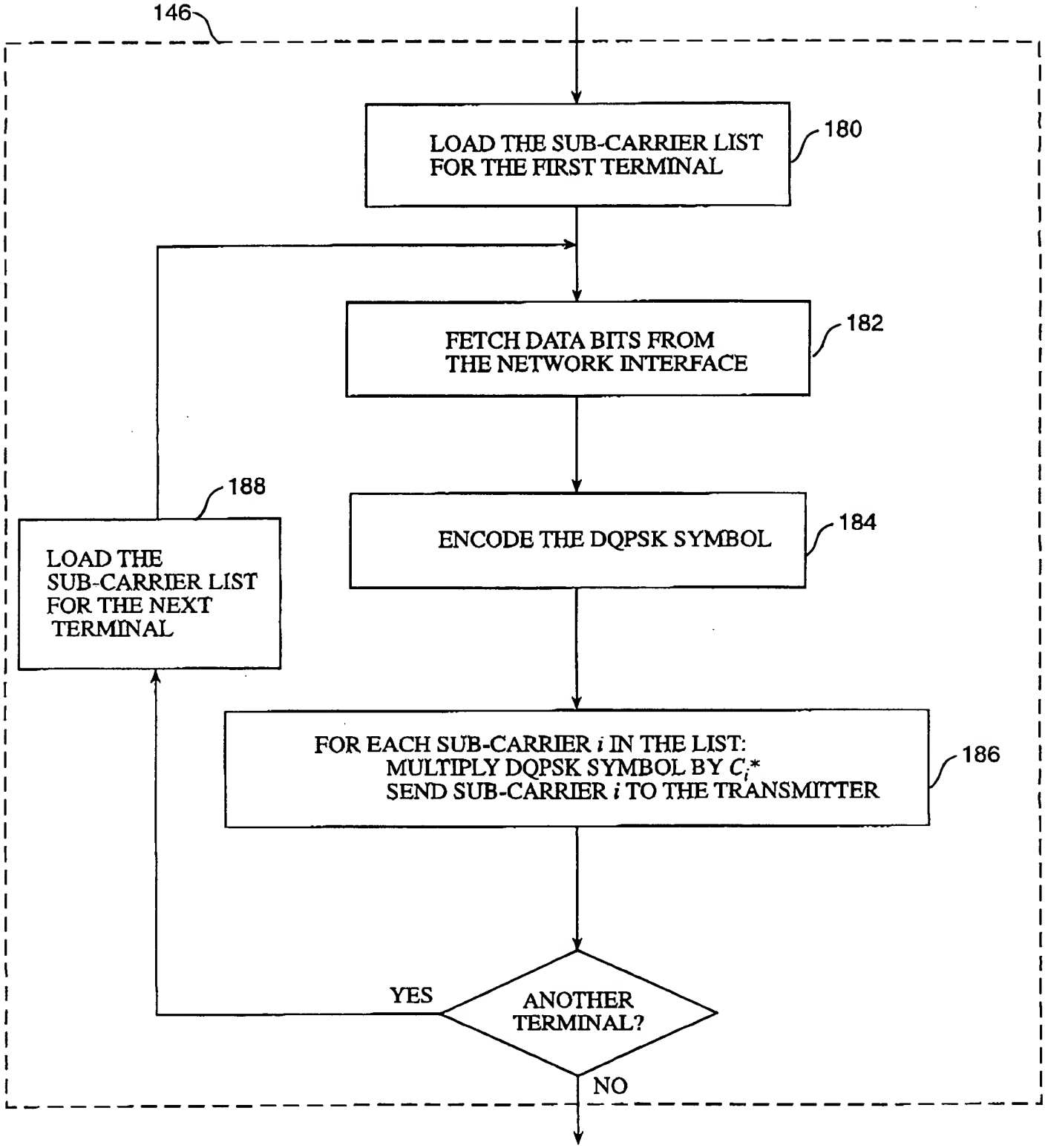

146
LOAD THE SUB-CARRIER LIST FOR THE FIRST TERMINAL
180
FETCH DATA BITS FROM THE NETWORK INTERFACE
182
ENCODE THE DQPSK SYMBOL
184
FOR EACH SUB-CARRIER i IN THE LIST:
MULTIPLY DQPSK SYMBOL BY C_i*
SEND SUB-CARRIER i TO THE TRANSMITTER
186
ANOTHER TERMINAL?
YES
NO
LOAD THE SUB-CARRIER LIST FOR THE NEXT TERMINAL
188

Figure 10

Received OFDM Signal

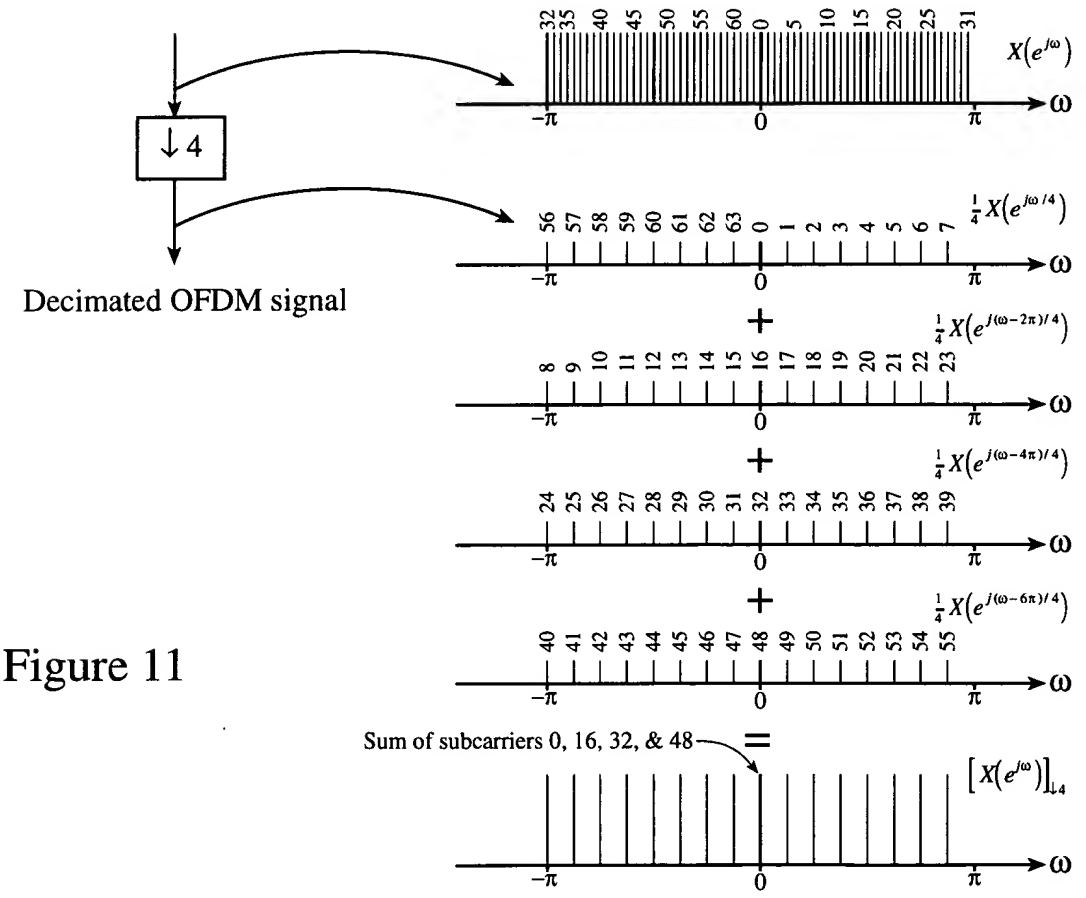
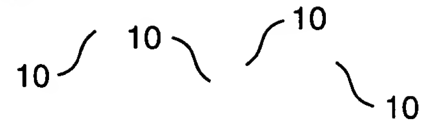


Figure 11



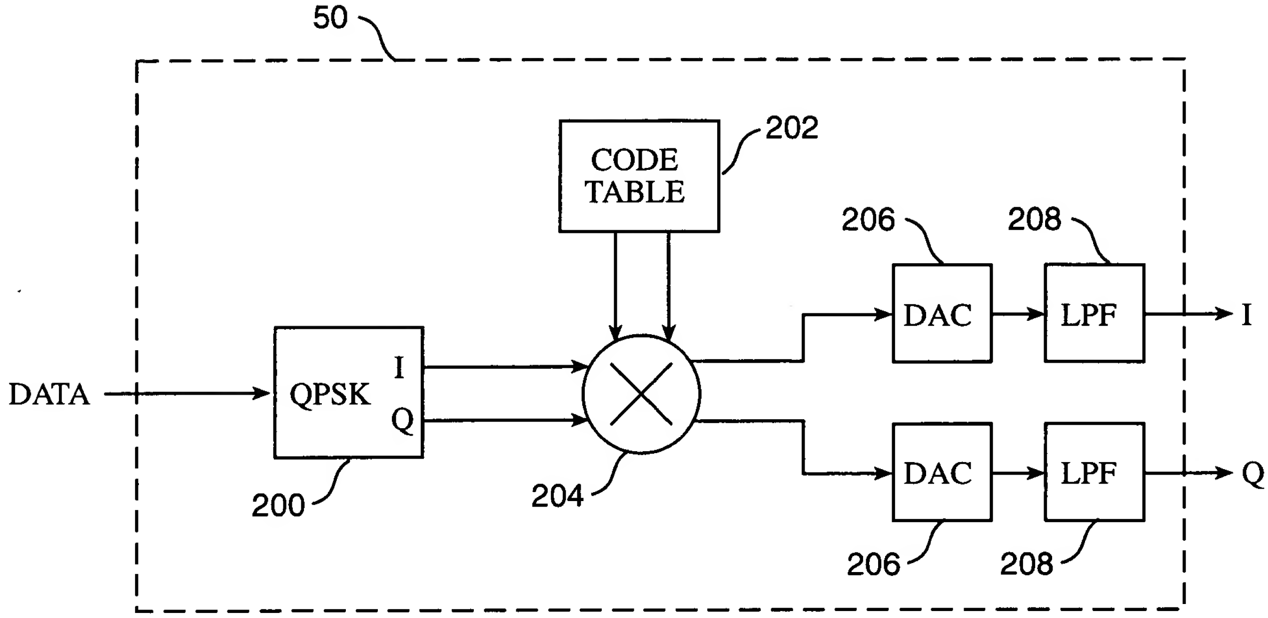


Figure 12

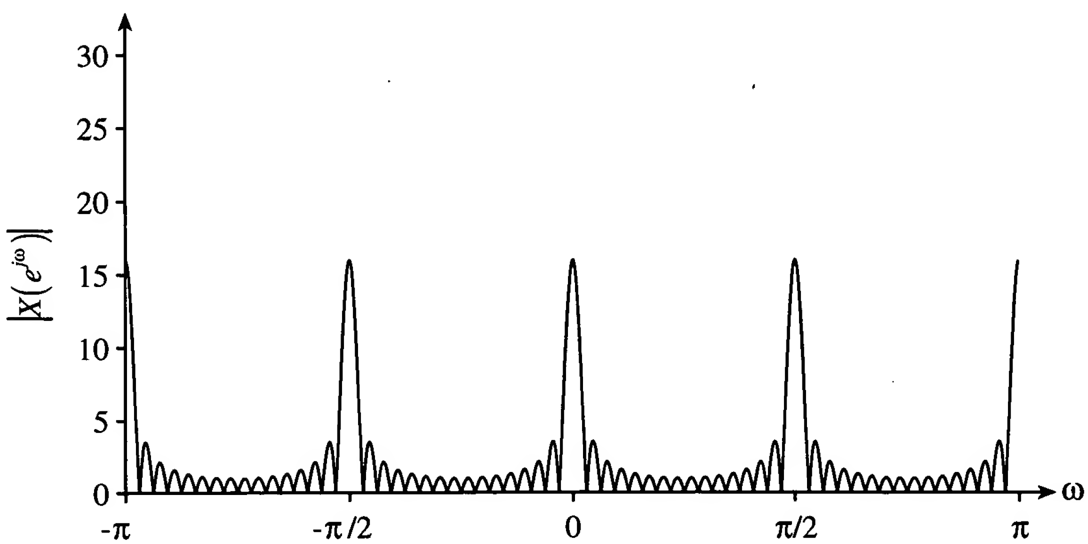


Figure 13

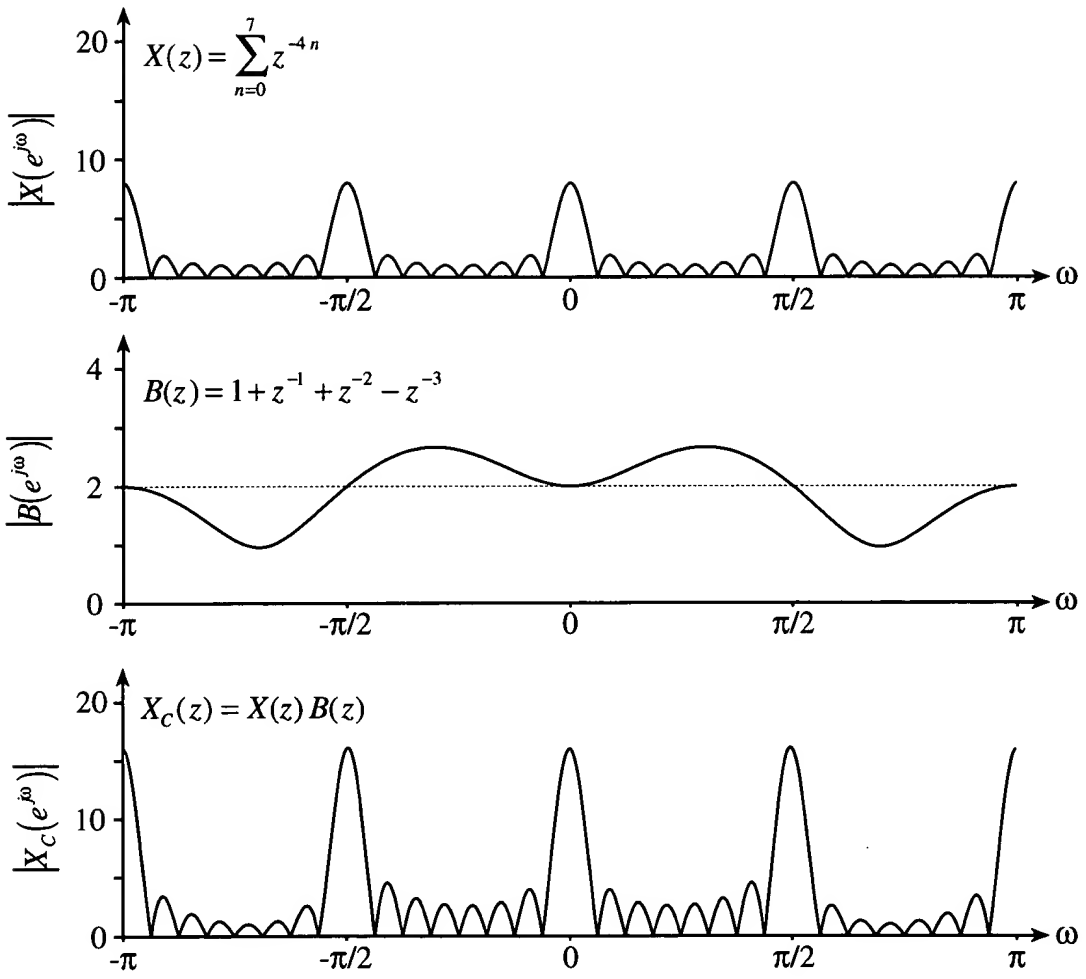

$X(z)=\sum_{n=0}^{7} z^{-4n}$
$|X(e^{j\omega})|$
20
10
0
-π
-π/2
0
π/2
π
ω
$B(z)=1+z^{-1}+z^{-2}-z^{-3}$
$|B(e^{j\omega})|$
4
2
0
$X_c(z)=X(z)B(z)$
$|X_c(e^{j\omega})|$

Figure 14

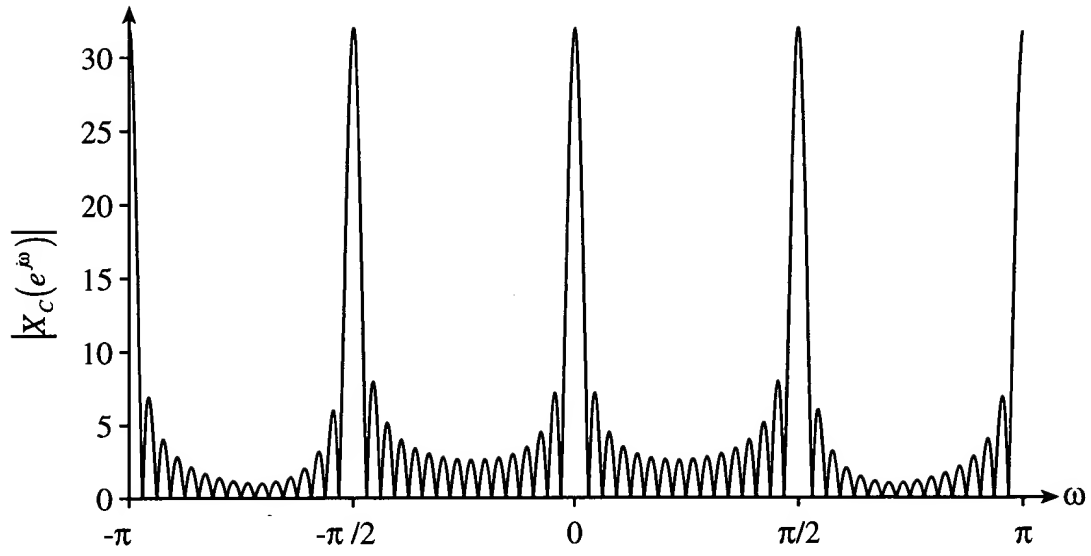


Figure 15

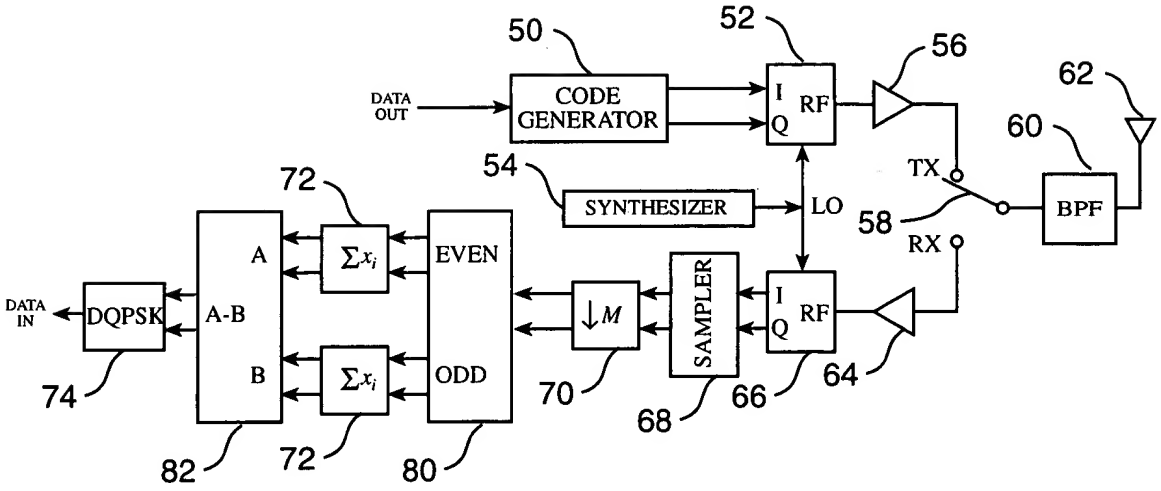


Figure 16

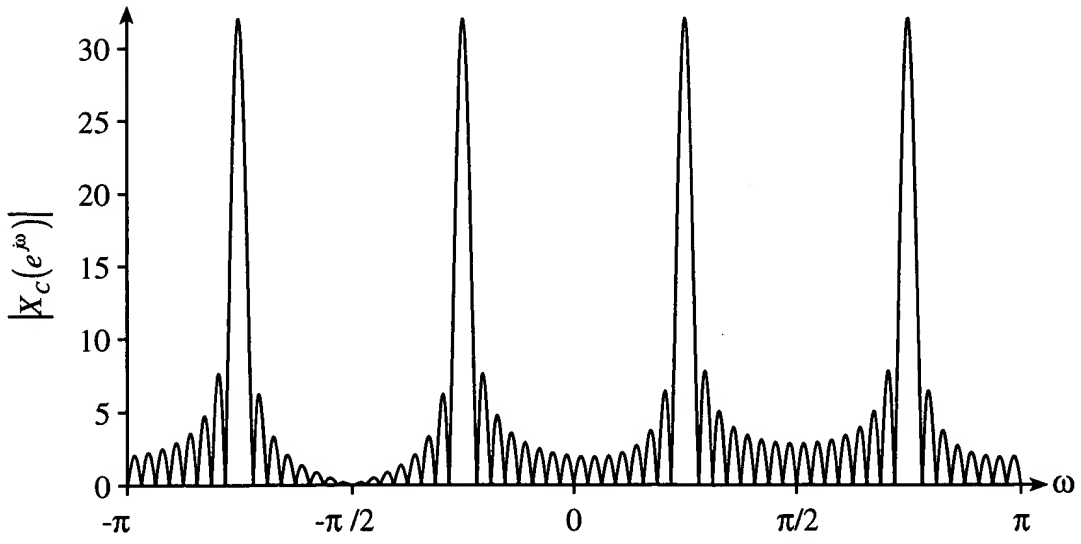


Figure 17